

# W5YI

America's Oldest Ham Radio Newsletter

## REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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### *In This Issue...*

VECs Hold Annual Conference  
Amateur by Class Since August 1999  
Amateur Station Call Signs to August  
ARRL Board of Directors Meeting  
League Requests New 5 MHz Band  
MFJ's Morse Code Reader  
Major Publishers Launch Elibrary  
SPAM - And What to do About it  
Global PC Sales Fall for First Time  
Chinese Government and the Internet  
Fast Internet Connections to Increase  
FCC Revises GMDSS Question Pool  
Amateur Radio Enforcement News  
Computer Security and Hacking  
Anti-Virus Experts Collaborate

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## VECs Hold 16<sup>th</sup> Annual Conference With FCC Officials

The 2001 edition of the National Conference of VECs got underway on Friday, July 27<sup>th</sup> as NCVEC Chairman Win Guin, W2GLJ called the meeting to order. There were 12 VEC organizations in attendance, (Anchorage, ARRL, CAVEC, GEARS, GLAARG, LAUREL, MRAC, SANDARC, Sunnyvale, WCARS, W4VEC, and the W5YI-VEC groups.) representing more than 99% of all examinations administered in the Amateur Service. Not in attendance were delegations from the Jefferson and MOKAN VECs.

A VEC acts as the link between the volunteer examiner (VE) community and the FCC. Their function is to approve volunteer examiners and to provide testing guidance, license examination materials and electronic filing of license applications for their accredited VE teams. The VECs are also responsible for revising the various question pools used in all Amateur Radio license examinations.

The VEC System consists of 14 VEC organizations who oversee the activities of an estimated 3000 VE teams and some 35,000 accredited VEs. They meet annually with Washington DC and Gettysburg PA Federal Communication Commission officials to discuss and agree on Amateur Service examination and licensing issues.

Also at the conference were the following FCC personnel: Bill Cross W3TN, Riley Hollingsworth K4ZDH, Steve Linn, N4CAK, Judy Dunlap and Karen Wrege. Retired FCC staffer John Johnston,

W3BE attended on behalf of the Quarter Century Wireless Association (QCWA.) Larry Weikert, also FCC retired, and ARRL Vice President Kay Craigie WT3P were visitors

### **Meeting started at 8:00 a.m., Friday**

NCVEC Chairman Win Guin welcomed everyone and explained the agenda. The minutes of the previous conference were accepted unanimously. Next came the committee reports.

Scotty Neustadter W4WW, Chairman of the VEC's *Question Pool Committee*, gave the QPC's report. He said that all pools were "...in good shape." The next pool to be revised will be the Element 4 pool for the Extra Class license. A new Element 4 will be released to the public on December 1, 2001, and must be used in all Extra Class examinations administered on or after July 1, 2002.

Johnny Johnston, a previous FCC Washington, DC staffer who was heavily involved in Amateur Radio Service rulemaking matters - now retired - attended the Conference on behalf of the Quarter Century Wireless Association. Johnston, a QCWA director, praised the QPC's work and said that the pools "...had not been dumbed down" as some people had charged. He believes that today's examination questions "...are far superior to the ones the FCC was able to develop in years past.

Johnston feels that the QCWA could assist the QPC in the exam question revision process since

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# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #2

August 15, 2001

the QCWA has many experienced and technically qualified amateurs in their membership. The Question Pool Committee welcomed the assistance and Johnston will serve as an additional member of the QPC.

## Rules Committee Report

...was presented by its Chairman, Fred Maia W5YI. He discussed how the upcoming WRC-2003 to be held in Caracas, Venezuela might impact the VECs. This past Spring, the ITU's Working Party 8 and the IARU developed a document entitled "*Minimum Qualifications of Radio Amateurs, ITU-R M. [RAM. QUAL]*" with the objective of having the various administrations of the world accept it.

These new Amateur Radio qualifications are proposed to be "mentioned" in the ITU regulations but published in another volume, a so-called "*Incorporation by Reference*" strategy. The theory is that it is easier to change future qualifications if they lie outside of the international radio regulations.

Maia mentioned that the VECs had already taken the position in the Amateur restructuring proceeding of opposing required Morse code proficiency and including mandated examination topics in the rules. The ITU document contained references to both of these matters. The so-called "*Minimum Qualifications of Radio Amateurs*" that came out of the ITU's Working Party 8 added specific knowledge topics back into the international Amateur Radio rules including "Methods of Communication." And specifically mentioned was "Radiotelegraphy."

The country of Finland objected to the inclusion of "radiotelegraphy" as a requirement and managed to get the word "theoretical" knowledge inserted into the document. Even so, there was widespread belief that the inclusion of the word "radiotelegraphy" into the document would cause confusion at the international level.

The FCC's International Bureau has also formed various industry advisory committees (called *Informal Working Groups* or IWG) that are assisting the Commission, the NTIA and the Department of State on all agenda items being considered at WRC-2003.

Amateur Radio matters are being handled by IWG-6 which has been conducting meetings at FCC headquarters in southwest Washington, DC. The Vice Chairman of this committee is ARRL's Walt Ireland, WB7CSL. The latest meeting was held on July 11th.

The objective of these meetings is to develop a Preliminary View (or PV) on each issue. The United States delegation to WRC-2003 will take the recommendations of their advisory groups into consideration when arriving at a final U.S. position.

While IWG-6 initially supported the "*Incorporation by Reference*" scheme, it has now been agreed to strike all references to the "*Minimum Qualifications of Radio Ama-*

*teurs.*" The U.S. Amateur Radio operator qualification position will now continue to be based on a sentence which simply states, "Administrations shall verify the technical and operational qualifications of any person wishing to operate an amateur station." That is essentially the same wording that is in the current S.25.6 international law.

The second line: "A person seeking a license to operate an amateur station shall be required to demonstrate a knowledge of the topics specified in ITU-R Recommendation M.[RAM-QUAL]." has now been eliminated from the proposed U.S. position. Both ARRL's Paul Rinaldo W4RI (who was involved in the ITU Working Party 8 and in writing the original "Minimum Qualifications of Radio Amateurs" document) and ARRL's Walt Ireland WB7CSL who is Vice Chairman of the FCC's Informal Working Group 6 are now supporting this change.

Since the ARRL is the lead organization in the IARU, and supplies its major officers, it is believed that the IARU will also drop their support of the "*Minimum Qualifications of Radio Amateurs*" document and support the position of the FCC's Informal Working Group 6.

In any event, it appears that the position of the United States as far as IWG-6 is concerned has been reached. That position now goes to the FCC's Wireless Advisory Committee to be later reconciled with the NTIA and the Dept. of State. From there, it is off to Caracas and WRC-2003.

Maia said that these matters had received little coverage in the amateur radio press but are important to the future of amateur radio. Discussion followed about how these recommendations might be adopted by the FCC.

## NCVEC Guidelines

Next, the *Custodian of VEC Instructions*, Michele Cimbala WK3X, addressed the revisions to the telegraphy test recommendations that were circulated and approved by e-mail since the last NCVEC meeting. Many VECs discussed recommendations for "standardization" of code tests - and how to avoid candidates "shopping" for easier code tests.

Also reviewed was the recent change in the code test character speed to 13 to 15 wpm with a recommended tone range between 700 and 1000 hertz. She also presented other proposed minor revisions to the Instructions and changes to sections that required action, mainly due to the FCC rules amendment concerning expense reimbursement. The FCC no longer limits examination (expense reimbursement) fees. They were previously tied to increases in the Consumer Price Index.

## Effects of Restructuring

R. C. Smith W6RZA of the Greater Los Angeles VEC gave a presentation showing the effects of



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #3

August 15, 2001

restructuring on the Amateur Service. He collected statistics from before, during and after the FCC's Amateur Service restructuring, excluding clubs, military and RACES licenses, but including expired licenses in the 2 year "grace period" for renewal. Data for the study was derived from the FCC's online Public Access files.

"The sharp increases in the codeless Technician, General and Extra Classes and corresponding losses in Novice, Tech Plus and Advanced Classes were predominantly the result of upgrading" made easier by the code exam reduction to 5 wpm.

In general, a small increase in the amateur population has taken place, not a decline. And overall, restructuring has resulted in a decline in code proficiency but an increase in technical proficiency. He concluded that "Although the recovery of the Amateur Radio Service population has been painfully slow, restructuring was successful in turning the decline. The prospects for future growth, although more modest than earlier anticipated, are markedly improved."

## Amateurs by Class Since August 1999

CLASS	8/28/1999	4/15/2000	8/20/2000	7/28/2001
Novice	66,468	62,186	59,266	54,101
Technician	199,038	204,984	211,237	231,167
Tech Plus	145,013	144,180	118,476	101,166
General	118,739	115,478	135,282	141,053
Advanced	109,102	106,835	93,012	89,722
Extra Class	77,193	77,648	93,012	97,655
Total	715,553	711,311	710,285	714,864

Note: The above figures include approximately 30,000 amateurs whose license has expired less than 2 years (i.e. in the "grace period" for renewal.)

## Code Credit

The issue of code credit for the various kinds of Technician license was raised. FCC's Bill Cross, W3TN stated that a person who passes both the Technician theory exam and code test receives a *Certificate of Successful Completion of Examination (CSCE)* and is entitled to 10-meter band voice privileges for the duration of the Technician license. However, the CSCE for code "exam" credit will always expire in 365 days. In other words, the code credit certificate is valid for permanent HF operating privileges, but only one year of examination credit.

## Exam Needs in Remote Areas

Jim Wiley KL7CC from the Anchorage VEC informed the Conference of the special examination needs of individuals in remote parts of his state, Alaska. He said that his VEC has perhaps up to 100 would-be applicants who are effectively denied a license examination due to the inaccessibility of their locations; there are no roads into their sites and a chartered plane is too expensive to hire for transportation to a license exam. Other areas have no

amateurs (or too few) who can qualify as VEs to give exams. He noted that in years past, a "conditional" exam by mail was allowed; this facilitated the testing of examinees in a remote areas. Fred Maia noted that there was rampant cheating with the old "conditional" exam.

Jim asked the VECs if they could agree upon a way to allow testing in a remote manner, for example, to allow a trusted non-VE at a remote exam location to positively identify the applicant and "proctor" the exam to ensure that no cheating would take place.

After many minutes of discussion, it was agreed to have the NCVEC form a committee to investigate "if" and "how" to accomplish remote testing, and that the committee would have ARRL and W5YI representation. The committee will keep all VECs informed of progress by E-mail.

## FCC Presentations

Each of the FCC staffers in attendance each gave a brief report. Bill Cross was first, and gave a general response to Jim Wiley's concerns. Bill said that requests have been made in the past to the FCC to decrease the number of examiners. The statute allowing amateur exams to be given by amateurs requires that the administering examiner(s) hold a higher class of amateur license than the one being administered, except for the highest class of license, Extra.

However, the statute does not require multiple examiners; the "three VE" rule was written into Part 97 when the VEC system was created and was specifically requested by the amateur community. He noted that VEs perform more functions than simply administering exams: They also verify the applicant's ID, ensure that the application is filled out properly, grade the exams and submit the paperwork to the VEC.

He pointed out that a change to the rules to allow non-amateurs to give amateur exams would require a statute change (meaning Congressional action), but only a Part 97 rulemaking change would be required to allow a different number of examiners to be used. In conclusion, he cautioned that it would be difficult to administer different VE systems for different areas of the country.

## FCC Enforcement

Riley Hollingsworth K4ZDH (Enforcement Bureau) said that FCC enforcement of the rules is here to stay; today's FCC Chairman is at least as highly interested in enforcement as the previous Chairman. He said the VEC system works very well in general; amateur complaints to the FCC are down and there are only a few enforcement problems, mainly concentrated in Puerto Rico. He cautioned VECs to ensure that all the rules are obeyed, e.g. not to process an exam session with only two VEs for expediency's sake. He recommended constant VEC



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #4

August 15, 2001

monitoring and "random" auditing of exam sessions.

## Electronic Filing Issues

Steve Linn N4CAK (FCC Gettysburg) said that ULS (the Universal Licensing System) is working very well; there are only a few enhancements and requests pending within his department. The FCC would like to list opportunities for amateur exams on a web page so applicants can more easily reference them, so he is looking to the VEC community to supply links to their web pages containing testing information.

Judy Dunlap (also of Gettysburg) said that it is the FCC's goal that CORES registration will become mandatory on October 1, 2001. Karen Wrege updated the Conference on the progress of ULS development. She said VECs have been instrumental in "pushing" the FCC to improve its licensing services. Several areas of ULS (such as searches) are known to be inefficient and will be improved over time. In the future, (no FCC implementation date was given), the date of birth will be collected with license applications but will be kept internally by the FCC.

Bill Cross then conducted a general question-and-answer session:

**Q:** Several VECs asked: Could a "P" instead of a "T" be kept in the FCC database to help identify renewing Technicians who had passed a code test?

**A:** Sometimes what VECs want and need from the FCC's database can't readily be accomplished due to OMB or regulatory restrictions, not due to inability to access the information. It would not be easy to justify the work required to implement this request, and it may become a moot point if WARC 2003 results in the elimination of code as a licensing requirement.

**Q:** Several VECs asked: What is the status of the several outstanding rule change petitions for frequency (re)allocations?

**A:** Since there is no person at the FCC who works full-time on amateur matters, the FCC's preference would be to handle all the requests in one proceeding affecting all bands. Consideration of these items is still pending.

**Q:** R. C. Smith asked: What is the proper procedure for changing a first and last name on a license application?

**A:** Judy Dunlap said that if the change comes via an online, password-protected request from the licensee, the change would be unquestioned, but if it comes through a batch process, the first name would be checked against the database for integrity. Since this could sometimes cause a problem, special requests such as this case should be phoned into Gettysburg.

**Q:** Kay Craigie asked: How responsive would the FCC be to Part 97 changes at this point in time, considering

that WARC 2003 will be held in the near future?

**A:** Bill Cross said: Action from WARC 2003 will eventually result in licensing changes, so any change to the Part 97 rules would have no direct relationship to WARC changes and would be processed in the normal manner.

When all questions were answered and the FCC personnel had departed, Jim Wiley asked the Conference if the VECs should reinstitute the "Tech Plus" database they had maintained in the past. Scotty Neustadter W4WW said that differentiating between Technicians with and without code credit is an enforcement problem and isn't strictly a VEC concern. The general consensus was that developing, maintaining and distributing a "Tech Plus" database is not worthwhile at this time.

## Report on Renewal Handling

Fred Maia W5YI presented a five-year report on the license renewal program. He said that NCVEC Conference expenses, 1x1 callsign database expenses, QPC expenses, etc. are subsidized by the fees collected by a "convenience" license renewal service conducted under the auspices of the NCVEC.

These fees were allowed by an enabling Order from the FCC dated July 17, 1996. More than 300,000 renewal notice packets have been mailed since starting this program (average 5,000 per month). About one-third of all amateur renewals are performed by the program; it saves the FCC money and saves confusion on the part of the applicants. Income has averaged \$12,000 per year and almost balances the collective annual expenses of the National Conference of VECs.

## Award to Ray Adams

R.C. Smith presented an award to Ray Adams W4CPA of WCARS VEC on behalf of the Conference. Ray was recognized for giving 14 years of outstanding service as Chairman of the QPC. He received a standing ovation from all attendees.

## Election of NCVEC Officers

As the last action of the Conference, Win Guin conducted the election of NCVEC officers for 2001/2. The following officers were elected unanimously:

Custodian of Instructions: Michele Cimbala WK3X

Assistant Custodian: Gene Wright WA6ZRT

Chairman of the QPC: Scotty Neustadter W4WW

QPC members: Fred Maia W5YI, Bart Jahnke W9JJ

Treasurer: Ray Adams W4CPA

Chairman of the Rules Committee: Fred Maia W5YI

Secretary: Steve Sternitzke NS5I

Chairman of NCVEC: John Creel WB3GXW

Vice-chairman of NCVEC: Win Guin W2GLJ



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #5

August 15, 2001

## AMATEUR RADIO STATION CALL SIGNS

...sequentially issued as of the first of August 2001:

Radio District	Group A Extra	Group B Advanced	Group C Tech/Gen.	Group D Novice
0 (*)	AB0RS	KI0RZ	(***)	KC0LDG
1 (*)	AA1YT	KE1LZ	(***)	KB1HBL
2 (*)	AB2RE	KG2RN	(***)	KC2IE
3 (*)	AA3XI	KF3EB	(***)	KB3GXO
4 (*)	AG4KB	KV4FR	(***)	KG4OQJ
5 (*)	AD5EZ	KM5XL	(***)	KD5PGQ
6 (*)	AD6YV	KR6ET	(***)	KG6HKV
7 (*)	AC7OI	KK7WZ	(***)	KD7NYZ
8 (*)	AB8LL	KI8JZ	(***)	KC8RYJ
9 (*)	AB9CT	KG9RA	(***)	KC9ABK
N. Mariana	NH0Z	AH0BB	KH0NI	WH0ABP
Guam	(**)	AH2DO	KH2VM	WH2AOC
Hawaii	(**)	AH6RB	KH7ZZ	WH6DGO
Am.Samoa	AH8W	AH8AI	KH8DP	WH8ABF
Alaska	(**)	AL7RR	KL1DQ	WL7CVI
Virgin Isl.	(**)	KP2CR	NP2LT	WP2AIN
Puerto Rico	WP3T	KP3BM	WP3LS	WP4NOU

\* = All 1-by-2 and 2-by-1 call signs have all been assigned. AA-AK-by-2 now being assigned.

\*\* = All 2-by-1 call signs have been assigned.

\*\*\* = Group "C" (N-by-3) call signs have all been allocated in all districts. (K-by-3 and W-by-3 are not assigned under the sequential call sign system. Available only to the Vanity Call Sign system.)

**Note:** The following prefix numerals are now allocated to Puerto Rico (KP, NP, WP3 or 4), Hawaii (AH, KH, NH, WH6 or 7) and Alaska (AL, KL, NL WL1 thru 0)

[Source: FCC Amateur Service Database, Washington, DC]

## THE ARRL BOARD OF DIRECTORS MEETING

...was held for the second time this year at the Hartford Marriott Inn in nearby Rocky Hill, Connecticut on July 20 and 21, 2001. Also in attendance was William Cross W3TN of the Federal Communications Commission.

► Vice President Kay Craigie WT3P commented on the fabulous results shown from a two week intensive Amateur Radio course for kids called "Tech Camp" at a community college near Dallas, Texas. Each of the kids in the course passed the Extra Class exam and some attended HamCom, a long standing Dallas hamfest. She stressed that all Amateurs must continue to promote the idea that Ham Radio is for all age and socioeconomic groups.

► The Pitcairn Island Amateur Radio Association has applied for membership in the IARU and the ARRL voted to accept their admission.

► The plans for the upcoming IARU Region 2 meeting in Guatemala in October and the 40 meter band harmonization are going well in the Region with welcome assistance from CITEL, the inter-American conference of telecom officials.

► The League's investment position is down at the present time due to the decline in the stock market. The ARRL's financial condition is good and slightly ahead of budget projections.

► The ARRL is continuing to develop strategies for dealing with the ever more serious CC&R (Deed Covenants, Conditions and Restrictions) problems affecting antenna placement.

► Chris Imlay W3KD, the League's General Counsel discussed issues surrounding getting additional Amateur frequency allocations at 135.7-137.8 kHz and 160- 190 kHz, a primary allocation at 2400-2402 MHz, and a domestic allocation at 5 MHz.

► It was voted to prepare and immediately file a Petition for Rulemaking seeking a domestic allocation on a secondary basis of the band 5,250- 5,400 kHz. The petition will include the following operating parameters: (1.) Full Amateur operating power, (2.) Access to the allocation by licensees holding General, Advanced, or Amateur Extra Class, and; (3.) All emission modes authorized for other present amateur HF bands, without creation of subbands by regulation.

► The newly implemented DXCC "Card Checker" program under the auspices of Section Managers is very successful and now accounts for 20% of the DXCC credits. In 2002, the ARRL will implement in "Logbook of the World Program" to electronically process log data for DXCC and other awards.

► In order to improve emergency communications capabilities, The Board adopted a resolution to support and extend ARRL Field day to all countries in ITU Region 2 (the Americas) beginning in 2002.

► The ARRL Board selected Bill Morine N2COP as the winner of the 2001 Philip J. McGan Silver Antenna Award, George Tranos N2GA for the 2000 Herb S. Brier Instructor of the Year Award, Allan Cameron N7UJJ as the 2000 ARRL Professional Educator of the Year, Richard Flanagan W6OLD for the 2000 ARRL Excellence in Recruiting Award, Thaddeus W. Huff KC0AQG for the 2000 ARRL Hiram Percy Maxim Award, Steven Strauss NY3B for the 2000 ARRL Technical Service Award, J.P. Martinez G3PLX and R.S. Larkin W7PUA for two ARRL Technical Innovation Awards, Paul Wade W1GHZ for the ARRL Microwave Development Award and Howard Teller KH6TY and Dave Benson K1SWL as the recipient of the 2000 Doug DeMaw W1FB Technical Excellence Award for their article, "A Panoramic Transceiving System for PSK31," which appeared in the June 2000 issue of QST.

► The ARRL bylaws were amended to include a spe-



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #6

August 15, 2001

cial reduced dues rate (up to 50% less) for Full members who are 21 years old or less.

- ▶ The ARRL is in the process of hiring a Chief Development Officer who will have responsibility for - and supervisory authority over - any and all matters relating to fund raising.

- ▶ Evelyn Gauzens W4WYR was presented with a plaque commemorating her 22 years of service to the ARRL as Southeastern Division Vice Director.

- ▶ NASA is pleased with the performance of the Amateur Radio program on the International Space Station, and the positive publicity that has been generated thanks to the ARISS QSOs with schools around the world. A Working Group is planning to place additional equipment aboard the Space Station.

- ▶ The ARRL *Technology Working Group on Digital Voice* reported on its progress toward high speed Digital Networks and Multimedia (HSMM) and Software Defined Radio (SDR).

- ▶ A resolution was adopted seeking either an experimental license or a Part 97 waiver so the ARRL can conduct automatically controlled beacon (propagation study) operations in the 160 meter amateur band at 1800-1801 kHz and 1999-2000 kHz. A revised 160 Meter band plan was adopted calling for:

1.800 - 1.810	Digital modes
1.810	CW QRP
1.800 - 2.000	CW
1.843 - 2.000	SSB SSTV and other wideband modes
1.910	SSB QRP
1.995 - 2.000	Experimental
1.999 - 2.000	Beacons

- ▶ Dr. Greg Lapin N9GL represents ARRL on the FCC's *Technological Advisory Council*. The committee continues to monitor the NCI epidemiological (RF health hazard) study of radio amateurs and assists the investigators to maintain the highest level of accuracy.

- ▶ The *Ad Hoc Antenna Case Committee* has elected to partially fund the continuing antenna case of Barry N4IFE and Kathy KF4IDH Gorodetzer, of Fort Lauderdale, Florida, who are involved in a CC&R matter.

- ▶ The ARRL *Industry Advisory Council* reported that Radio Shack plans to include Ham Radio promotional material in the packaging of scanners and short wave radios.

- ▶ A "how to" package will be developed to assist amateurs in their efforts to obtain relief from state and local land use restrictions including sample ordinances applicable to amateur antennas and support structures and exempting amateur antennas from commercial tower ordinances.

- ▶ A resolution was adopted urging organizers of ham-fests and conventions to provide free admission to individuals under 16 years of age when accompanied by an at-

tendee who pays the full price of admission.

- ▶ The ARRL will work with Internet security organizations to develop and improve capabilities to support emergency communications needs.

- ▶ The FCC will be requested to modify its 1x1 call sign program to accommodate the issuance of temporary 2x1 call signs from United States prefixes designating areas which contain no mailing addresses.

- ▶ A resolution was adopted recognizing that private *Covenants Conditions and Restrictions* (CC&Rs) prohibiting or preventing the use of Amateur Radio antennas in residential areas effectively ban Amateur Radio in those areas and have proliferated over the past twenty years.

## ARRL RESPONDS TO MFJ MORSE CODE READER

Bart Jahnke W9JJ of the ARRL VEC has sent the following e-mail message out to its VE teams. (This device was also discussed at the recent VEC Conference.)

"Several of you have contacted the ARRL and MFJ regarding your concern over the recent "MFJ Morse Code Reader" advertisements in QST [August, page 133] and other media. A statement in the ad text that-while clearly in jest-has peak concerns by VEs and others in suggesting that if one were to consider cheating by using this new pocket sized device, to "...at least not get caught!"

"The ARRL VEC and its tens of thousands of VEs take great strides to ensure that cheating is prevented. A primary task of three or more person VE teams is to ensure that no one cheats (monitoring the test session is one of the VEs most important duties). And, when necessary, one of the more challenging tasks of VEs is that when cheating is identified it is dealt with swiftly by the VE team.

"As always, if someone is observed to be cheating by using such a device at your ARRL VEC test sessions, please handle the matter as if the device were a calculator with formulas or answers programmed in its memory. That is, notify the examinee that using such a device allows an advantage in taking the exam; and that such an advantage is prohibited. Advise the person their exam is considered failed; and direct the person to leave the examination site. Do NOT confiscate the device (just as you would not confiscate a calculator), but you can advise the examinee to not bring any such device to future exams.

"We understand that the detection sensitivity of this particular device may be such that the device must be relatively close to the audio source.

"Lastly, be sure to include in your usual public and in-person test session announcements a statement regarding the non-permitted use of any code reading devices during the examination, to follow any statement(s) you already may be making about programmable calculators, etc."



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #7

August 15, 2001

## CUTTING EDGE TECHNOLOGY

**No overdue book fees at Elibrary!** You will shortly be able to read entire books on the Web at no cost! Two huge publishing houses (McGraw Hill and London-based Pearson Publishing which owns *The Learning Network*, Penguin books and Random House) are financing Ebrary ...a virtual library. Their Ebrarian service enables people to scour business and economic digital books for free in PDF format on the Web. They plan on an October launch.

Ebrary's founder and CEO is Chris Warnock 34, son of Adobe Systems Inc., co-founder and co-CEO John E. Warnock.

Ebrary's business model makes the text free and easily accessible to consumers who only pay a fee for downloaded, copied or printed copies. The titles cost about 25¢ per page in printed form, 50¢ for photocopies. Their revenue will come from sharing these fees with publishers, from advertising and from sales commissions when Ebrary users purchase books.

The service eliminates the hassle of leaving your home to locate and determine if a book meets your needs. People can browse through the publication online at no cost ...much as they could at a library or bookstore. See: <www.ebrary.com>.

Two other dot.coms, <www.netlibrary.com> and <www.questia.com> are also attempting to cash in on a library/bookstore model. The netLibrary service allows publishers to increase the number of short-run titles by eliminating the printing cost.

Other short-run digital printers (such as <www.Bookmobile.com> and <www.deharts.com>) have also joined forces with netLibrary. Questia charges a monthly \$19.95 (\$149.95 annual) subscription fee and you can search their library by topic.

**Invention is often the mother of necessity, rather than vice versa:**

"A good example is the history of Thomas Edison's phonograph, the most original invention of the greatest inventor of modern times.

When Edison built his first phonograph in 1877, he published an article proposing ten uses to which his invention might be put. They included the last words of dying people, recording books for blind people to hear, announcing clock

time, and teaching spelling. Reproduction of music was not high on Edison's list of priorities.

A few years later Edison told his assistant that his invention had no commercial value. Within another few years he changed his mind and did enter business to sell phonographs -- but for use as dictating machines.

When other entrepreneurs created jukeboxes by arranging for a phonograph to play popular music at the drop of a coin, Edison objected to this debasement, which apparently detracted from serious office use of his invention.

Only after about 20 years did Edison reluctantly concede that the main use of his phonograph was to record and play music." [Jared Diamond's *Guns, Germs and Steel: The Fates of Human Societies*.]

## EMERGING COMMUNICATIONS

**Annoyed with SPAM - those annoying unsolicited commercial electronic mail messages?** Making yourself hard to reach no longer works. E-mail addresses that were previously harvested by web robots are now also found by automatic programs that try every possible character combination that appears before the "@" sign. Those addresses that "stick" are considered "active" and sold. The people with the shortest user names are the easiest to find.

The fact is that most e-mail clients have some sort of filter to reduce (or totally eliminate) SPAM. Strangely, few people seem to know about them or use them!

Microsoft's free web "Hotmail" has various "Junk Mail Filters" including an option that sends every message received (unless the e-mail address is in your Address Book) to a Junk Mail Folder. You only get a new mail prompt if the address is on your "Safe List." About once a week you can sift through your Junk Mail Folder to determine if any address should be added to your Address Book.

Microsoft's Outlook Express allows you set mail from certain people to a specific color and you can filter our messages that contain words or phrases.

Eudora Pro and Netscape Messenger also have filter features where you can select the content you want searched and if found automatically transfers the message sight unseen to the trash bucket.

In America Online you will find the "Junk Mail Controls" when you enter the keyword SPAM. Click on "Junk Mail," then "Set up Mail Controls."

**Sen. Ron Wyden (Oregon-D) and Sen. Conrad Burns (Montana-R) have introduced "The SPAM Act"**

which would require bulk e-mailers to identify themselves; provide a valid return e-mail address; be honest about the e-mail contents; and give the recipients an easy way to prevent further contact. Violators could be fined \$10 for every inbox they reach, up to a maximum of \$500,000. That would sure get some attention if enacted!

## COMPUTERS & SOFTWARE

**A**ccording to a Gartner Dataquest study, **global PC sales declined for the first time ever during the April to June 2001 quarter.** There were 30.4 million personal computers shipped during the second quarter, down 1.9 percent. In the U.S., sales dropped by 6.1 percent to 10.7 million units. The United States accounts for almost 40 percent of all PC sales. Bucking the trend, computer shipments increased in Japan by 5 percent and in all of Asia by about 9 percent. Dell was the only U.S. computer maker not to suffer sales loss, either in the US or worldwide.

**The new pop-under ad format is not effective in attracting buyers,** so says researcher Jupiter Media Metrix.

Pop-under ads appear in a new browser window at the bottom of all windows displayed on a PC. Jupiter says that they only succeed in annoying would be customers. "Internet users are not interested in irrelevant advertising that does not entertain them." But you will probably be seeing a lot more of them! Yahoo, for one, is testing them.

## INTERNET NEWS

**The Internet has hit the Chinese government with the force of an explosion!** Only a tiny fraction of

China's 1.3 billion people have Internet access or computers so they have been flocking to the nation's enormously popular Internet cafés that have names like "Keep in Touch." More than 20 percent of all Internet access in China is from a



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #8

August 15, 2001

cybercafé.

But the days of uncensored information and contact with foreign peers may be coming to an end. After a series of inspections of the country's internet cafés that began in April, new standards were jointly put in place by the ministries of Public Safety, Mass Communication and Culture.

Now Beijing has ordered 2,000 cybercafés to close down and suspended another 6,000 in an effort to rid the country of "online poison." Those that are left have been ordered to use "information purifiers" – devices which will allow the authorities to monitor which websites are being accessed from the cafés' computers and scan websites for certain keyword content. Online discussion forums in China are limited to non-controversial topics.

**C**hinese President Jiang Zemin has also called for new laws against what he called superstition, pornography, violence and destructive (politically subversive) information on the net. Dissident groups that mail thousands of electronic periodicals into China are particularly targeted.

Internet usage in China now stands at 26.5 million according to the China Internet Network Information Centre. This is up 17.7 percent since the start of the year and 56.8 percent since last year.

It terrifies Beijing's officials, who fear the Net will dissolve their power over the masses. Researcher, the Yankee Group, says the Asia-Pacific region (which excludes Japan) will have the most users in the world by 2005, surpassing the United States.

Many Chinese surfers understand how to use proxy servers to reroute connections through a third computer in order to deceive the Great Red Firewall of China.

Mail from China to foreign addresses is often blocked but can be sidestepped using an overseas mail online account such as Yahoo or Hotmail. The Voice of America Chinese language e-mail news broadcast is also blocked, but is frequently rerouted through a Hotmail or similar account located outside of China. Yahoo remains the most popular web property in Asia, attracting about half of all Chinese users.

## WASHINGTON WHISPERS

**I**n a huge (134-page) page study, the FCC predicts that by 2004 nearly half

of all Internet connections in the United States will be high-speed broadband. Right now, cable modem connections have the lead over DSL but two-way broadband connections via DBS (direct broadcast satellite) services – such as DirecTV and EchoStar) will become a formidable competitor.

According to two surveys, DBS subscribers say that the "Quality of picture" and "greater number and variety of channels" are the main reasons consumers have satellite rather than cable TV.

But DBS broadband is substantially slower than cable. This is because, right now, DBS relies on a telephone return path. Satellites send info down to your computer, but they can't receive it.

The FCC noted in their study that this is about to change. Within 2 years, both DirecTV and EchoStar will ditch the telephone-return for a satellite return system which will greatly speed up connections.

Right now, cable has the lead over DSL. The FCC mentioned a Morgan Stanley Dean Witter report that predicts 10.1 million DSL subscribers by the end of 2002, more than the projection of 9.1 million cable-modem subscribers.

Nearly three quarters of the U.S. now has a broadband service available to them ...up from about 20 percent as recently as 1998 (when 56 kbs dial up service was just getting going.)

Analysts say the big increase in broadband availability was brought about by AT&T's \$48 billion purchase of cable giant Tele-Communications Inc. in 1998. It provided a way for AT&T to enter the cable broadband and local phone service market.

The phone companies, fearing a loss of their customer base, responded with a massive DSL sign-up campaign. They knew that once a customer has cable (which is faster), there is no chance they will switch to DSL.

Check out: <[www.broadbandcompass.com](http://www.broadbandcompass.com)> If you want to find out how fast your Internet connection is ...and what broadband options (and their costs) are available to you?

**L**ast November, the FCC said it would be revising the Commercial Radio Operator GMDSS (Global Maritime Distress and Safety System) Element 7 question pool.

The National GMDSS Implementation Task Force had submitted for FCC review a completely revised model test pool for Element 7 and proposed that it be adopt-

ed in its entirety. Successful completion of this exam results in the GMDSS Operator Certificate (GOC.)

The GMDSS Task Force was chartered by the U.S. Coast Guard to expedite the implementation of the GMDSS – a satellite-based radio service that more or less replaces radiotelegraphy communications on the high seas.

On July 25th, the FCC released a *Public Notice* stating that the proposed new Element 7 question pool has been adopted. "The new question pool draws heavily on the existing FCC GMDSS question pool used to examine candidates for the GOC. It consists of 600 multiple choice questions regarding 100 key topics. Each of the key topics has six questions." The FCC envisions that "...a random selection of one question from each key topic will result in a well-balanced 100-question examination. A copy of the new Element 7 question pool is posted to <<http://www.fcc.gov/Bureaus/Wireless/Informal>>

The new pool may be implemented immediately for GMDSS Operator examinations or the existing Element 7 pool may be used for a period not to exceed six months (until January 25, 2002.)

## AMATEUR RADIO

**T**he FCC has contacted eleven volunteer examiners concerning alleged apparent discrepancies in Amateur Radio license testing procedures at an ARRL-VEC exam session held in Statesboro, GA on May 19<sup>th</sup>.

Some of improper procedures reportedly involved administering examinations previously used for training classes and practice tests ...and administering Morse code exams where the test candidates had prior access to the answer key. It also appears that at least one applicant signature is a forgery.

**L**ester M. Killingsworth KE6WSC (Hollywood, CA) has entered into a consent agreement with the FCC whereby he will not operate on any amateur repeater system for a period of two-and-one-half years. The action was in response to a violation notice sent Killingsworth on June 15, 2001 concerning his operation on the W6NUT repeater system.

If there are no violations of the agreement, the prohibition against repeater operation will automatically expire on January 21, 2004.



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #9

August 15, 2001

## THE CAT-AND-MOUSE GAME OF COMPUTER SECURITY Russian Computer Programmer Arrested at Hacker Convention

The Defcon convention is the annual hacker's gathering that attracts underground programmers from all over the world. It was created nine years ago as a way for hackers to stay in touch, meet their "heros" and exchange ideas. Held every year in Las Vegas, it attracts thousands of hackers. This year's convention, held from July 13 to 15 at the off strip Alexis Hotel and Resort, drew about 5,000 hacktivists, crackers and virus writers.

Two days before DefCon Nine, the computer security industry's "Black Hat Briefings" trade show opened July 11th at the upscale Caesars Palace. Both shows are organized by the same people, but Defcon came first. DefCon One was held June 9-11th, 1993 at the Sands Hotel and Casino ...since demolished. It costs \$1,000 to attend to the computer security show, only \$50 admission to Def Con. <www.blackhat.com>, <www.defcon.org>.

The Black Hat show concentrates on the latest advances in detecting computer site break-ins, tracking down the guilty parties, next-generation e-mail viruses and the latest security strategies for wireless networking. But the real information gathering starts when it is over.

Most programming and security professionals (and federal agents) stay on and attend DefCon ...many posing as undercover hackers. Some have little trouble making the transition since many reformed hackers are now security professionals!

Black Hat's overpriced booth exhibits are replaced by DefCon's cheap, penny-pinching displays as the computer security industry changes overnight from corporate suits to T-shirts and faded jeans. Their goal then becomes to find out what the underground is up to and to learn the newest tricks of the programming trade.

It is a really a case of the criminals teaching the professionals ...sort of a "If you can't fight them, join them" concept. It is probably the only known staged situation where the "pros" go to learn from the "amateurs" ...who are usually the first source of real innovation (not to mention future employees.) The system seems to work.

Crazy as they are, hackers represent a key source of technology intelligence for the big players. They know it ...and are proud of it. Many of DefCon's sessions focus on a variety of hard-core technology topics, including hacker techniques ...such as writing "back doors" and "A Layman's Introduction to Quantum Cryptology" (by "Super Dave" who has an MIT degree in physics.) Other topics covered include telephony and computer network security, attacking control, routing, and tunneling protocols, data "mining", enabling "extra features" in hardware, defeating background investigations, penetrating firewalls, ...design, implementation, and distribution of international computer viruses ...and other (not so) "nice" stuff.

There was even a slide-show presentation by the

CTO (Chief Technology Officer) of "HavenCo." This offshore tax and "datahaven" (we have written about it before) is located at the Principality of Sealand - a self-proclaimed sovereign World War II fortress "country" in the North Sea off the east coast of England.

Def Con has a reputation as a wild underground affair that includes a lot of partying, (an interesting scavenger hunt included the strip hotels), mischief (the personal cell phone numbers of celebrities meticulously "researched" over a year's time were distributed), hacking (a supposedly secure wireless network was set up and destroyed), games (such as X-rated Hacker Jeopardy) ...and even a "Spot the Fed" contest to identify spies (federal agents.) Correct calls get to wear a "I spotted the fed!" T-shirt, and the "I.F." (Identified fed) must wear a "I am the fed!" shirt.

Hackers arm themselves with small portable radios so they can listen to their own pirate "DefCon Nine FM" radio station. Wandering reporters were getting up-to-the-minute gossip from people "@ The Con" and broadcasting it randomly throughout the day. Even though promoted in advance on their website, we saw no mention that the FCC closed it down ...or was even interested in doing so. A DefCon Movie Channel of questionable substance ran on the hotel's closed cable system.

## Copy protection and the law

A favorite "fun" activity of hackers is to remove security safeguards from software. It is almost like a game to them ...and they are good at it. They consider it a challenge to eliminate copy protection from computer programs. And they never fail to do so. Up until last year there were no U.S. laws that made it a crime to write programs that "enhance" existing software.

The controversial 1998 *Digital Millennium Copyright Act*, (DMCA) prohibits anyone from manufacturing products that bypass copy protection features. The music recording industry was a major backer of the legislation.

One of the DefCon presentations, entitled "eBooks security - Theory and Practice," included a demonstration of electronic books and their weak security. It featured a Russian programmer from the Moscow-based software company, ElcomSoft. They have developed a decoder program that allows electronic books to be read without paying the fee. It caught the attention of the FBI. The program simply removes the password protection and converts Adobe System's encrypted e-books into regular Adobe Portable Document Format (PDF) files. It then can be read by anyone using the free Adobe Acrobat PDF viewer.

The availability of the program caused Barnes and Noble to stop selling some eBooks at its online store. They resumed sales once Adobe was able to release an enhanced eBook Reader encoder forcing consumers to



# W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #10

August 15, 2001

purchase the digital books before reading them.

Adobe became aware of the \$100 program some time ago and demanded that it be taken off the market. Adobe's position is that the Russian program violates U.S. copyright law.

There are no laws against such software in Russia – or any other country for that matter – similar to the DMCA. Many security experts agree that weak computer programs and/or hardware do not deserve protection. The *Electronic Frontier Foundation* is in the process of filing a lawsuit trying to declare the DMCA unconstitutional on free-speech grounds.

The Electronic Frontier Foundation (EFF) is a non-profit organization working in the public interest to protect fundamental civil liberties, including privacy and freedom of expression in the arena of computers and the Internet. EFF was founded in 1990, and is based in San Francisco, California.

The FBI has been secretly attending the Defcon convention in recent years and last month arrested the Russian programmer who gave away copies of ElcomSoft's security-defeating program. ElcomSoft's Dmitry Sklyarov was arrested in his hotel room after his presentation on the poor security of Adobe's e-book reader software as he was preparing to return to Moscow.

Sklyarov was arraigned in federal court in Las Vegas and ordered jailed without bond. He was indicted on charges of trafficking in copyrighted software. The court has now transferred the case to a federal court in San Francisco. He faces up to five years in prison and fines of up to \$500,000 if convicted.

In a surprising turnaround, Adobe Systems has now called for the release of Dmitry Sklyarov. Adobe said it had decided the prosecution was not the best way to enforce the *Digital Millennium Copyright Act*. Copyright law experts had said this case could set a precedent on the constitutionality of the digital copyright law.

## **ANTI-VIRUS EXPERTS COLLABORATE OVER WEB**

The most authoritative site on new computer viruses is one you have never heard of! It is not generally known that the virus research departments from the world's top virus protection software vendors actually work together.

By definition, a computer virus is: "A self-replicating piece of computer code that can partially or fully attach itself to files or applications, and can cause your computer to do something you don't want it to do." It must make copies of itself to spread.

The *Wildlist Organization International* is a large highly qualified volunteer group of 64 anti-virus professionals who provide information to both users and other security product developers. They serve as reporters.

One of their goals is to offset some of the 'numbers

games' played by some anti-virus software vendors. In reality, it isn't the absolute number of viruses that the packages detect that's important. It is the ones that are currently in general use and spreading. They make their list available to the public, free of charge.

"The Wild List" (which is updated monthly) is regarded in the industry as the most authoritative inventory of active viruses running around the Internet. A virus makes the WildList when a sample is received and positively identified by two or more anti-virus reporters.

The list of viruses found to currently spreading began five years ago in the garage of anti-virus expert Joe Wells. The WildList has grown into the world's authority on which viruses users should really be concerned with. It is published on the 15th day of each month at <[www.wildlist.org](http://www.wildlist.org)>.

Computer viruses can spread swiftly causing billions of dollars worth of damage in a short amount of time. According to CNN, five years ago, the chance you'd receive a virus over a 12-month period was about 1 in 1000; today, your chances have dropped to about 1 in 10. Most viruses enter your system through e-mail attachments.

## **The "W32SirCam" virus.**

The Sircam virus which exploded across the world last month, continues to infect systems. The "worm" is designed to publish random files from an infected computer's "My Documents" folder to people listed in their Windows address book. The virus is activated when the recipient double-clicks on its attachment.

It is difficult to detect by sight since the virus is disguised as an actual file from the victim's computer. It could potentially send confidential business data or embarrassing personal information along with itself.

The computer "worm," also known as "Code Red" has already hit thousands of U.S. government and military Web servers including those of the FBI and Pentagon. Several FBI documents were mailed to outsiders before the virus was noticed and brought under control. The FBI said no sensitive or classified information was disclosed.

The malicious code is attached to a message that always reads in the body: "Hi! How are you? followed by a sentence like "I send you this file in order to have your advice." And always ends with "See you later. Thanks." There is also a Spanish version.

Besides overloading e-mail, the SirCam virus might also delete files on October 16th and/or fill up hard disk space by flooding it with text entries.

All anti-virus software firms have now rushed out detection and corrective removal remedies which delete the infected attachments. Based on the number of reports, its spreading ability and the potential danger, the virus has been declared "high risk" by anti-virus vendors. Word to the wise. Keep your anti-virus software updated!